

1. A computer-implemented method for using a device embedded in an apparatus to report the state of the apparatus to a remote computer, comprising:
 - detecting the state of the apparatus;
 - 5 generating an electronic mail message that reports the state of the apparatus using a self-describing computer language; and
 - sending the electronic mail message to the remote computer.

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2. The method of claim 1, wherein the state is indicative of an error condition in the apparatus.
3. The method of claim 2, wherein the error condition 15 comprises a variable that deviates from an acceptable value or a predetermined range of acceptable values.
4. The method of claim 1, wherein detecting the state comprises receiving the state from the apparatus.

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5. The method of claim 1, wherein detecting the state comprises retrieving the state periodically from the

apparatus.

6. The method of claim 1, wherein detecting the state comprises:

5 obtaining an identifier for the apparatus, the identifier relating to the state of the apparatus; and reading the state from the apparatus using the identifier.

10 7. The method of claim 1, further comprising:

 determining if the state of the apparatus has changed; wherein the electronic mail message is generated if the state of the apparatus has changed.

15 8. The method of claim 7, wherein determining

comprises comparing the state received from the apparatus to a previous state of the apparatus.

20 9. The method of claim 1, wherein the self-describing computer language comprises eXtensible Markup Language (XML).

10. The method of claim 1, wherein the electronic mail message is generated using a predefined template, the electronic mail message being generated by:

5 obtaining one or more variables relating to the apparatus; and

inserting the one or more variables into the template.

11. The method of claim 1, wherein the state of the apparatus is included as part of a body of the electronic 10 mail message.

12. The method of claim 1, wherein the state of the embedded device is included as part of an attachment to the electronic mail message.

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13. A computer-implemented method for obtaining a state of an apparatus from a device embedded in the apparatus, comprising:

20 receiving an electronic mail message that reports the state of the apparatus using a self-describing computer language; and

extracting the state of the apparatus from the

electronic mail message.

14. The method of claim 13, wherein the self-describing computer language comprises eXtensible Markup 5 Language (XML).

15. The method of claim 13, wherein the state is indicative of an error condition in the apparatus.

10 16. The method of claim 15, wherein the error condition comprises a variable that deviates from an acceptable value or a predetermined range of acceptable values.

15 17. The method of claim 13, further comprising passing the state of the apparatus to a customer relationship management system.

18. A computer program stored on a computer-readable 20 medium for reporting the state of an apparatus to a remote computer, the computer program comprising instructions that cause an embedded device in the apparatus to:

detect the state of the apparatus;
generate an electronic mail message that reports the
state of the apparatus using a self-describing computer
language; and
5 send the electronic mail message to the remote
computer.

19. The computer program of claim 18, wherein the
state is indicative of an error condition in the apparatus.

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20. The computer program of claim 19, wherein the
error condition comprises a variable that deviates from an
acceptable value or a predetermined range of acceptable
values.

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21. The computer program of claim 18, wherein
detecting the state comprises receiving the state from the
apparatus.

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22. The computer program of claim 18, wherein
detecting the state comprises retrieving the state
periodically from the apparatus.

23. The computer program of claim 18, wherein
detecting the state comprises:

obtaining an identifier for the apparatus, the
5 identifier relating to the state of the apparatus; and
reading the state from the apparatus using the
identifier.

24. The computer program of claim 18, further
10 comprising instructions that cause the embedded device to:

determine if the state of the apparatus has changed;
wherein the electronic mail message is generated if
the state of the apparatus has changed.

15 25. The computer program of claim 24, wherein
determining comprises comparing the state received from the
apparatus to a previous state of the apparatus.

26. The computer program of claim 18, wherein the
20 self-describing computer language comprises extensible
Markup Language (XML).

27. The computer program of claim 18, wherein the electronic mail message is generated using a predefined template, the electronic mail message being generated by:

5 obtaining one or more variables relating to the apparatus; and

inserting the one or more variables into the template.

28. The computer program of claim 18, wherein the state of the apparatus is included as part of a body of the 10 electronic mail message.

29. The computer program of claim 18, wherein the state of the apparatus is included as part of an attachment to the electronic mail message.

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30. A computer program stored on a computer-readable medium for obtaining a state of an apparatus from a device embedded in the apparatus, the computer program comprising instructions that cause a processor to:

20 receive an electronic mail message that reports the state of the apparatus using a self-describing computer language; and

extract the state of the apparatus from the electronic mail message.

31. The computer program of claim 30, wherein the
5 self-describing computer language comprises eXtensible
Markup Language (XML).

32. The computer program of claim 30, wherein the
state is indicative of an error condition in the apparatus.

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33. The computer program of claim 32, wherein the
error condition comprises a variable that deviates from an
acceptable value or a predetermined range of acceptable
values.

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34. The computer program of claim 30, further
comprising instructions that cause the processor to pass
the state of the apparatus to a customer relationship
management system.

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35. A device embedded in an apparatus for reporting
the state of an apparatus to a remote computer, the

embedded device comprising circuitry which:

- detects the state of the apparatus;
- generates an electronic mail message that reports the state of the apparatus using a self-describing computer language; and
- sends the electronic mail message to the remote computer.

36. The device of claim 35, wherein the state is indicative of an error condition in the apparatus.

37. The device of claim 36, wherein the error condition comprises a variable that deviates from an acceptable value or a predetermined range of acceptable values.

38. The device of claim 35, wherein detecting the state comprises receiving the state from the apparatus.

39. The device of claim 35, wherein detecting the state comprises retrieving the state periodically from the apparatus.

40. The device of claim 35, wherein detecting the state comprises:

obtaining an identifier for the apparatus, the identifier relating to the state of the apparatus; and reading the state from the apparatus using the identifier.

41. The device of claim 35, wherein:

10 the circuitry determines if the state of the apparatus has changed; and the electronic mail message is generated if the state of the apparatus has changed.

15 42. The device of claim 41, wherein determining comprises comparing the state received from the apparatus to a previous state of the apparatus.

43. The device of claim 35, wherein the self-describing computer language comprises eXtensible Markup Language (XML).

44. The device of claim 35, wherein the electronic mail message is generated using a predefined template, the electronic mail message being generated by:

obtaining one or more variables relating to the
5 apparatus; and

inserting the one or more variables into the template.

45. The device of claim 35, wherein the state of the apparatus is included as part of a body of the electronic
10 mail message.

46. The device of claim 35, wherein the state of the apparatus is included as part of an attachment to the electronic mail message.

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47. The device of claim 35, wherein the circuitry comprises a memory which stores executable instructions and a processor which executes the instructions.

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48. The device of claim 35, wherein the circuitry comprises one or more of an application-specific integrated circuit and a programmable gate array.

4.9. A first apparatus for obtaining a state of a second apparatus from a device embedded in the second apparatus, the first apparatus comprising circuitry which:

5 receives an electronic mail message that reports the state of the second apparatus using a self-describing computer language; and

extracts the state of the second apparatus from the electronic mail message.

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50. The first apparatus of claim 49, wherein the self-describing computer language comprises eXtensible Markup Language (XML).

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51. The first apparatus of claim 49, wherein the state is indicative of an error condition in the second apparatus.

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52. The first apparatus of claim 51, wherein the error condition comprises a variable that deviates from an acceptable value or a predetermined range of acceptable values.

53. The first apparatus of claim 49, wherein the circuitry passes the state of the second apparatus to a customer relationship management system.

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54. The first apparatus of claim 49, wherein the circuitry comprises a memory which stores executable instructions and a processor which executes the instructions.

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55. The first apparatus of claim 49, wherein the circuitry comprises one or more of an application-specific integrated circuit and a programmable gate array.

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56. A system comprising:
a first device comprising circuitry which generates an electronic mail message reporting a state of an apparatus using a self-describing computer language, and
a second device, in communication with the first device, the second device comprising circuitry which receives the electronic mail message from the first device.

57. The system of claim 56, wherein the circuitry in the second device extracts the state of the apparatus from the electronic mail message.

58. The system of claim 56, wherein the first device is embedded in the apparatus and the second device comprises a remote computer.